

SEQUENCE LISTING

<110> Cahoon, Edgar B.
Cahoon, Rebecca E.

<120> Enzymes Involved In Petroselinic Acid Biosynthesis

<130> BB1413 US NA

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<150> 60/169,968
<151> 9 DECEMBER 1999

<160> 12

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<212> DNA
<213> Hedera helix

<220>
<221> unsure
<222> (997)

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<211> 394
<212> PRT
<213> Hedera helix

<220>
<221> UNSURE
<222> (318)

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Phe	Met	Ala	Ser	Thr	Val	Asn	Ser	Asn	Ser	Met	Val	Leu	Asp	Asn	Leu	
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Lys	Ser	Pro	Pro	Asn	Leu	Gln	Val	Thr	His	Ser	Met	Pro	Pro	Gln	Lys	
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Leu	Glu	Ile	Phe	Lys	Ser	Leu	Asp	Asp	Trp	Ala	Arg	Asn	Asn	Val	Leu	
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Ile	His	Leu	Lys	Ser	Val	Glu	Lys	Ser	Trp	Gln	Pro	Gln	Asp	Tyr	Leu	
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Pro	Asp	Pro	Val	Ser	Asp	Gly	Phe	Glu	Glu	Gln	Val	Arg	Glu	Leu	Arg	
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Glu	Arg	Ala	Lys	Glu	Ile	Pro	Asp	Asp	Tyr	Phe	Val	Val	Leu	Val	Gly	
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Glu	Ile	Asp	Pro	Asp	Thr	Thr	Val	Ile	Ala	Phe	Ala	Asp	Met	Met	Arg	
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Leu Leu Phe Lys His Phe Thr Ala Val Ala Gln Arg Val Xaa Val Tyr
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Ser Ala Leu Asp Tyr Cys Asp Ile Leu Glu Phe Leu Val Asp Lys Trp
325 330 335

Asn Val Glu Arg Leu Thr Gly Leu Ser Asp Glu Gly Arg Lys Ala Gln
340 345 350

Glu Tyr Val Cys Glu Leu Gly Pro Lys Ile Arg Arg Val Glu Glu Lys
355 360 365

Val Gln Gly Lys Glu Lys Lys Lys Lys Ala Glu His Pro Val Ser Phe
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Ser Trp Ile Phe Asn Arg Glu Leu Lys Ile
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<211> 445
<212> DNA
<213> Hedera helix

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catcgatttc cttcacctct atcgcaagct ccctcaagca aaaccaggga cttgccaaga 180
gttcaatttc actctctgtc aatgggaaat ccttccgttc acttaggttg ctgtcggcac 240
cacttcgctt cagagtgtca tgcgcagcga aaccagcgac agtggacaag gtgtgtgaga 300
ttgtgcggaa acaactggcg ctgccgctga ttctgcaagt cactggagag tcaaaattcg 360
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<211> 114
<212> PRT
<213> Hedera helix

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Val Asn Gly Lys Ser Phe Arg Ser Leu Arg Leu Leu Ser Ala Pro Leu
35 40 45

Arg Phe Arg Val Ser Cys Ala Ala Lys Pro Ala Thr Val Asp Lys Val
50 55 60

Cys Glu Ile Val Arg Lys Gln Leu Ala Leu Pro Leu Ile Leu Gln Val
65 70 75 80

Thr Gly Glu Ser Lys Phe Ala Ala Leu Gly Ala Asp Ser Leu Asp Thr
85 90 95

Val Glu Ile Val Met Gly Leu Lys Glu Glu Phe Gly Ile Lys Arg Gly
100 105 110

Lys Lys
114

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<212> DNA
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catcgatttc cttcacctct atcgcaagct ccctcaagca aaaccagga cttgccaaga 180
gttcaatttc actctctgtc aatgggaaat ccttccgttc acttaggttg ctgtcggcac 240
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ttgtgcggaa acaactggcg ctgccggctg attctgcagt cactggagag tcaaaattcg 360
cagcgcttgg ggctgattct ctgcacacgg ttgagattgt gatgggacta gaggaggaat 420
tcggaatcag cgtggaagaa gaaagtgcac agaccattgc cactgttcaa gatgcagcgg 480
acctgattga gaagcttgtt gagaaaaagg agtagaagaa ccggggtaga aattctgcaa 540
aataggttta ttaaggacag ttactttatt aggatgggtc atcaagatct tcattaccct 600
acatttattt gtatgctcct catgaagccg caaaagtagt agtggtgatg aaatttacc 660
cgagtcttcg ccttaattat caaagtgaga gagccagaaa aagaggctat gctatctctc 720
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<210> 6
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<212> PRT
<213> Hedera helix

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20 25 30
Val Asn Gly Lys Ser Phe Arg Ser Leu Arg Leu Leu Ser Ala Pro Leu
35 40 45
Arg Phe Arg Val Ser Cys Ala Ala Lys Pro Ala Thr Val Asp Lys Val
50 55 60
Cys Glu Ile Val Arg Lys Gln Leu Ala Leu Pro Ala Asp Ser Ala Val
65 70 75 80
Thr Gly Glu Ser Lys Phe Ala Ala Leu Gly Ala Asp Ser Leu Asp Thr
85 90 95
Val Glu Ile Val Met Gly Leu Glu Glu Glu Phe Gly Ile Ser Val Glu
100 105 110
Glu Glu Ser Ala Gln Thr Ile Ala Thr Val Gln Asp Ala Ala Asp Leu
115 120 125
Ile Glu Lys Leu Val Glu Lys Lys Glu
130 135

THE

5

His Ala Met Tyr Asp Gly Ser Asp Asp Met Leu Phe Lys His Phe Thr
290 295 300

Ala Val Ala Gln Gln Ile Gly Val Tyr Ser Ala Trp Asp Tyr Cys Asp
305 310 315 320

Ile Ile Asp Phe Leu Val Asp Lys Trp Asn Val Ala Lys Met Thr Gly
325 330 335

Leu Ser Gly Glu Gly Arg Lys Ala Gln Glu Tyr Val Cys Ser Leu Ala
340 345 350

Ala Lys Ile Arg Arg Val Glu Glu Lys Val Gln Gly Lys Glu Lys Lys
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Ala Val Leu Pro Val Ala Phe Ser Trp Ile Phe Asn Arg Gln Ile Ile
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Ile
385

<210> 8
<211> 137
<212> PRT
<213> Coriandrum sativum

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20 25 30

Ala Lys Ala Lys Ser Phe Gly Ala Leu Thr Leu Arg Asn Ala Pro Leu
35 40 45

Arg Phe Arg Val Ser Cys Ala Ala Lys Pro Glu Thr Val Glu Lys Val
50 55 60

Cys Glu Ile Val Lys Lys Gln Leu Ala Leu Pro Pro Thr Thr Glu Val
65 70 75 80

Ser Gly Asp Ser Lys Phe Ala Ala Leu Gly Ala Asp Ser Leu Asp Thr
85 90 95

Val Glu Ile Val Met Gly Leu Glu Glu Glu Phe Gly Ile Ser Val Glu
100 105 110

Glu Glu Ser Ala Gln Ala Ile Ala Thr Val Gln Asp Ala Ala Asp Leu
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Ile Glu Lys Leu Cys Glu Lys Lys Glu
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<210> 9
<211> 1381
<212> DNA
<213> Hedera helix

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<210> 10
<211> 394
<212> PRT
<213> Hedera helix

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Phe Met Ala Ser Thr Val Asn Ser Asn Ser Met Val Leu Asp Asn Leu
          35          40          45

Lys Ser Pro Pro Asn Leu Gln Val Thr His Ser Met Pro Pro Gln Lys
          50          55          60

Leu Glu Ile Phe Lys Ser Leu Asp Asp Trp Ala Arg Asn Asn Val Leu
          65          70          75          80

Ile His Leu Lys Ser Val Glu Lys Ser Trp Gln Pro Gln Asp Tyr Leu
          85          90          95

Pro Asp Pro Val Ser Asp Gly Phe Glu Glu Gln Val Arg Glu Leu Arg
          100          105          110

Glu Arg Ala Lys Glu Ile Pro Asp Asp Tyr Phe Val Val Leu Val Gly
          115          120          125

Asp Met Ile Thr Glu Glu Ala Leu Pro Thr Tyr Met Ser Met Leu Asn
          130          135          140

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Arg Cys Asp Gly Ile Lys Asp Glu Thr Gly Ala Glu Pro Ser Ala Trp
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 Ala Met Trp Thr Arg Ala Trp Thr Ala Glu Glu Asn Arg His Gly Asp
 165 170 175
 Leu Leu Asn Lys Tyr Leu Tyr Leu Ser Gly Arg Val Asp Met Arg Lys
 180 185 190
 Ile Glu Lys Thr Ile Gln Tyr Leu Ile Gly Ser Gly Met Asp Ile Lys
 195 200 205
 Ser Glu Asn Ser Pro Tyr Leu Gly Phe Ile Tyr Thr Ser Phe Gln Glu
 210 215 220
 Arg Ala Thr Phe Ile Ser His Ala Asn Thr Ala Lys Leu Ala Gln His
 225 230 235 240
 Tyr Gly Asp Lys Asn Leu Ala His Ile Cys Gly Ser Ile Ala Ser Asp
 245 250 255
 Glu Lys Arg His Ala Thr Ala Tyr Thr Lys Ile Val Glu Lys Leu Ala
 260 265 270
 Glu Ile Asp Pro Asp Thr Thr Val Ile Ala Phe Ala Asp Met Met Arg
 275 280 285
 Lys Lys Ile Thr Met Pro Ala His Leu Met Tyr Asp Gly Ser Asp Glu
 290 295 300
 Leu Leu Phe Lys His Phe Thr Ala Val Ala Gln Arg Val Gly Val Tyr
 305 310 315 320
 Ser Ala Leu Asp Tyr Cys Asp Ile Leu Glu Phe Leu Val Asp Lys Trp
 325 330 335
 Asn Val Glu Arg Leu Thr Gly Leu Ser Asp Glu Gly Arg Lys Ala Gln
 340 345 350
 Glu Tyr Val Cys Glu Leu Gly Pro Lys Ile Arg Arg Val Glu Glu Lys
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<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR primer

<400> 11

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<210> 12
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<212> DNA
<213> Artificial Sequence

<220>
<223> PCR primer

<400> 12
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27

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